E. Douglas Jensen's
Real-Time for the Real World

My personal manifesto about the widely misunderstood field of real-time systems...

"I don't understand why people are frightened of new ideas. It's the old ideas that frighten me."
-- John Cage

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Last updated: 09/20/2009 14:19:28

About Me

2008

Doug is widely recognized as one of the original pioneers and leading visionaries of distributed real-time computer systems.

For example, in 1975-78 he performed and led the research (the Honeywell eXperimental Distributed Processor (HXDP) and technology transition leading to what is generally believed to have been the world's first deployed distributed real-time computer control system commercial product -- Honeywell's H930 combat data system on Taiwan's Yang (Wu Chin III) (ex-U.S. Gearing FRAM I) Class Frigates in 1976.

For that system Doug invented and received two patents for a real-time publish/subscribe communication network.

He was also a major contributor to the world's first distributed computer control system product for industrial automation, the Honeywell TDC-2000.

For his seminal contributions to the field of distributed real-time computing systems, Doug was honored with Honeywell's annual highest technical award. The recipient is selected by a panel of judges consisting of Honeywell management and non-Honeywell consultants.

Subsequently while on the CMU CS faculty (see below), he contributed as a consultant to the world's second distributed computer control system commercial product, the Westinghouse DCS.

Doug's principal interest is conducting applied research, advanced technology development, and technology transfer --especially in (but not limited to) the field of dynamic, adaptive, time-critical distributed systems for control applications at all levels of an enterprise.

Doug is currently a Consulting Engineer (Director level) in the Information and Computing Division, of the Innovation and Technology Directorate, of the Command and Control Center, in the DoD FFRD, at the MITRE Corporation's Bedford, MA headquarters.

He and his academic collaborating co-authors have published over 120 papers on results from his 2006-2008 research project in professional society conference proceedings and journals. Most of his technology transition work is classified.

Doug came to MITRE in 1998 from senior research and technology leadership positions at Hewlett Packard and Digital Equipment Corp. where he led development of commercial distributed real-time products.

Prior to that, he was on the faculty of the Computer Science Department at Carnegie Mellon University. There he created and led the largest real-time research group of its time, sponsored by all of the DoD services, DARPA, and numerous corporations.

One of his group's major achievements was the uniquely innovative Alpha distributed real-time operating system kernel. Keystone concepts and technologies from Alpha -- notably time/utility function time constraints, utility accrual scheduling optimality criteria, and distributed threads -- have subsequently been incorporated in the OMG Real-Time CORBA specification. Those have also been implemented in the MITRE Distributed Real-Time Java, which is being proposed for Sun's Distributed Real-Time Specification for Java. They have also been implemented in MITRE experimental BM/C2 projects, and in several COTS operating systems, and in research projects at various universities.

Before being invited to join the CMU CS faculty, he was employed in the real-time computer industry, where he engaged in research and advanced technology development of distributed real-time computer systems, hardware, and software for the defense and industrial automation domains.

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